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Inland Transport Committee

Working Party on the Transport of Dangerous Goods

Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods
Bern, 17-21 March 2014
Item 5 (b) of the provisional agenda
Proposals for amendments to RID/ADR/ADN: new proposals

Amendment of special provision 658 – use of large containers

Transmitted by the Government of Austria[1, 2]

Summary

Executive summary: Special provision 658 sets out simplified conditions for the carriage of lighters and lighter refills up to certain quantities "in" wagons/vehicles.

Action to be taken: For the sake of clarity, the provision should be extended to cover large containers.

Introduction

1. Special provision 658 entered into force in RID/ADR 2013. It sets out simplified conditions for the carriage of UN 1057 lighters and UN 1057 lighter refills, provided certain quantities are not exceeded. The total gross mass of such packages "carried in a wagon/vehicle" must not exceed 100 kg.

[1] In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94, ECE/TRANS/2012/12, programme activity 02.7 (A1c)).

[2] Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2014/33.

2. This rule should do away with the need for special agreements RID 5/2010 and ADR M213 according to RID/ADR Chapter 1.5, which prescribe similar simplified conditions. However, the corresponding limit in the agreement for road transport relates to the transport unit. On this basis, the usage of large containers was not called into question. But the wording "in a wagon/vehicle" does not provide the same degree of clarity. As large containers are used for this type of transport operation, Austria proposes this should be made clear specifically in special provision 658.

Proposal

3. In special provision 658 (b), add after "wagon/vehicle":

"or large container".

Justification

Safety: The amendment does not affect transport safety and provides the legal certainty that the provisions of special provision 658 apply not only to carriage in wagons and vehicles, but also in containers.

Feasibility: No problems are anticipated. The amendment provides legal certainty and reflects current practice.

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Bern, 17–21 March 2014
Item 2 of the provisional agenda
Tanks

Vacuum-operated waste tanks

Transmitted by the Government of France[1], [2]

Summary

Executive summary: This proposal seeks to reinforce protection for vacuum-operated waste tanks against the risk of fire or explosion during discharge or filling operations.

Action to be taken: Amend 6.10.3.8 (b) and add a new paragraph to Chapter 4.5.

Reference documents: ECE/TRANS/WP.15/AC.1/2013/12 and 2013/36;
ECE/TRANS/WP.15/AC.1/130/Add.1, item 6;
ECE/TRANS/WP.15/AC.1/132/Add.1, item 1.

Introduction

1. At its March 2013 session, the Joint Meeting adopted an amendment to 6.10.3.8 based on proposal ECE/TRANS/WP.15/AC.1/2013/12, from Germany, introducing the

[1] In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94, ECE/TRANS/2012/12, programme activity 02.7 (A1c)).

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concept of an explosion-pressure proof design as an alternative to the mandatory flame trap at the inlet and outlet of a vacuum pump/exhauster unit, which may create sparks.

2. At its September 2013 session, the Working Group on Tanks considered proposal ECE/TRANS/WP.15/AC.1/2013/36, from France, which sought to clarify the provisions to protect vacuum-operated waste tanks against the risk of fire or explosion during discharge or filling.

3. The Working Group confirmed that there was a risk of propagation of explosion, specifically during start of filling and end of discharge, when the tank and discharge hose are not filled with liquid, and considered that the inclusion of operational provisions could address this concern.

4. During vacuum-operated pumping of flammable waste using a tank fitted with a vacuum pump/exhauster, the atmosphere inside the tank may become explosive. This explosive atmosphere can then be propagated in the vacuum pump/exhauster. The risk is even greater when pumping a pool of spilled or leaked product, or residue at the bottom of a container, as the product pumped is highly oxygenated by the large amount of air that is pumped along with it.

5. If the vacuum pump/exhauster is likely to generate a source of ignition, an explosion is highly probable. If there is an explosion, it is very likely that it will propagate into the tank and thence into the installations attached to it, either upstream or downstream (see diagram in informal document INF.5). Even if the tank is of a size to tolerate the pressure created by such an explosion, the connected installations upstream and downstream are generally speaking not so designed. The consequences are therefore an explosion, a fire in the connected installations, bursting of the connecting tubes, causing serious injury to operators, and extensive material damage.

6. The fact that a tank is of a size to tolerate explosion pressure is not an adequate safeguard either for operators or for the installations connected to the tank during vacuum-operated discharge or filling. In our view that warrants the addition of a new paragraph in Chapter 4.5, on the use of vacuum-operated waste tanks, and an amendment to the adopted wording of 6.10.3.8 (b), to aid comprehension.

Proposal

7. Amend 6.10.3.8 as follows:

"6.10.3.8 The tanks shall be fitted with the following additional service equipment:

...

(b) A device to prevent immediate passage of flame shall be fitted to ~~both the inlet and outlet~~ **all openings** of a vacuum pump/exhauster unit which may provide a source of ignition and which is fitted on a tank used for the carriage of flammable wastes, or the tank shall be explosion-pressure shock resistant, which means being capable of withstanding without leakage, ~~but allowing~~ **while tolerating** deformation, an explosion resulting from the passage of the flame."

8. In Chapter 4.5, add a new 4.5.2.5 as follows:

"4.5.2.5 When a vacuum pump/exhauster unit which may provide a source of ignition is used to pump materials or waste with a flashpoint below 60°C, it must be ensured that all installations and equipment upstream and downstream that communicate with the interior of the tank and the vacuum pump/exhauster

unit during filling and discharge operations are either protected by devices to prevent the propagation of a flame or of a size and design such as to be explosion-pressure proof."

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Item 5 (a) of the provisional agenda
Proposals for amendments to RID/ADR/ADN
Pending issues

Definition of the maximum total quantity per transport unit in 1.1.3.6 for adsorbed gases

Transmitted by the Government of France[1,2]

1. The Joint Meeting has adopted new entries for adsorbed gases. However, no consequential amendment seems to have been made to 1.1.3.6 in respect of the determination of quantities.

2. In this regard it is suggested that adsorbed gases should be treated in the same way as gases under pressure.

Proposal

In the amendment adopted for 1.1.3.6.3, replace

"For compressed gases and chemicals under pressure, the water capacity of the receptacle in litres."

[1] In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94, ECE/TRANS/2012/12, programme activity 02.7 (A1c)).

[2] Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2014/35.

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"For compressed gases, adsorbed gases and chemicals under pressure, the water capacity of the receptacle in litres."

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Proposals for amendments to RID/ADR/ADN:
Pending issues

Lithium batteries contained in vehicles and equipment assigned to UN Nos. 3166 and 3171

Transmitted by the Government of France[1,2]

Summary

Executive summary: The text of special provision 240 of the UN Model Regulations is found in RID/ADR in a Note to 2.2.9.1.7. In RID/ADR, UN Nos. 3166 and 3177 are fully exempted, unlike other modes. The status of the lithium batteries contained in such vehicles or equipment is thus not very clear in terms of the applicable test and design requirements, exemption from which was never contemplated.

Decision to be taken: Add a provision to the effect that lithium batteries contained in vehicles and equipment are not exempt from the tests under section 38.3 of the Manual of Tests and Criteria or from the construction requirements of the batteries themselves.

[1] In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94, ECE/TRANS/2012/12, programme activity 02.7 (A1c)).

[2] Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2014/36.

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Introduction

1. The United Nations Sub-Committee of Experts on the Transport of Dangerous Goods has adopted a text for special provision 240 that is intended to draw a clear distinction between equipment and vehicles powered by lithium batteries consigned under UN Nos. 3091 and 3841, and those consigned under UN Nos. 3166 and 3171.

2. The latter two are subject to simplified transport conditions (notably in respect of packaging).

3. However, the Model Regulations and maritime and air transport regulations do not exempt the batteries themselves from construction requirements and prototype testing intended to ensure their intrinsic safety.

4. The fact that under RID/ADR, UN Nos. 3166 and 3171 are declared "not subject" to the Regulations could be seen to imply that the lithium batteries contained in such vehicles and equipment are also exempt from construction requirements and can be built following an untested design.

5. This is not the interpretation given by the competent authorities in France, however, and it is not desirable either from a security standpoint or as regards multimodal harmonization.

6. Moreover, if it were the case, these batteries could no longer be transported outside the equipment or vehicle they are designed to power.

7. In order to avoid incorrect interpretation of the text, the following amendments are proposed.

Proposal 1

Add the following text at the end of the last Note in 2.2.9.1.7:

"Lithium metal batteries and lithium ion batteries contained in vehicles or equipment consigned under UN Nos. 3166 or 3171 shall meet the same requirements as those established for UN Nos. 3091 and 3841 in this paragraph."

Proposal 2

In Table A of Chapter 3.2, for entries 3166 and 3171, after the words "NOT SUBJECT TO ADR/TO RID/TO ADN" add "except 2.2.9.1.7".

Justification

Clarification of the meaning of the text, and improved safety and intermodal harmonization.